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Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-051: Particular requirements for laboratory equipment for mixing and stirring

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EUROPEAN STANDARD

**EN 61010-2-051**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2003

ICS 19.080; 71.040.20

Supersedes EN 61010-2-051:1995

English version

**Safety requirements for electrical equipment for measurement,  
control, and laboratory use**  
**Part 2-051: Particular requirements for laboratory equipment  
for mixing and stirring**  
(IEC 61010-2-051:2003)

Règles de sécurité pour appareils  
électriques de mesure,  
de régulation et de laboratoire  
Partie 2-051: Prescriptions particulières  
pour appareils de laboratoire  
utilisés pour mixer et agiter  
(CEI 61010-2-051:2003)

Sicherheitsbestimmungen für elektrische  
Mess-, Steuer-, Regel- und Laborgeräte  
Teil 2-051: Besondere Anforderungen an  
Laborgeräte zum Mischen und Rühren  
(IEC 61010-2-051:2003)

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This European Standard was approved by CENELEC on 2003-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 66/325/FDIS, future edition 2 of IEC 61010-2-051, prepared by IEC TC 66, Safety of measuring, control and laboratory equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61010-2-051 on 2003-10-01.

This European Standard supersedes EN 61010-2-051:1995.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2004-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-10-01

This Part 2-051 is intended to be used in conjunction with EN 61010-1:2001.

This Part 2-051 supplements or modifies the corresponding clauses in EN 61010-1 so as to convert it into the European Standard: Safety requirements for laboratory equipment for for mixing and stirring.

Where a particular clause or subclause of Part 1 is not mentioned in this part 2, that clause or subclause applies as far as is reasonable. Where this part 2 states "addition", "modification", "replacement" or "deletion" the relevant text of Part 1 is to be adapted accordingly.

In this standard:

- 1) the following print types are used:
  - requirements: in roman type;
  - NOTES: in smaller roman type;
  - *conformity and test*: in italic type;
  - terms used throughout this standard which have been defined in Clause 3: SMALL ROMAN CAPITALS;
- 2) subclauses, figures, tables and notes which are additional to those in Part 1 are numbered starting from 101.

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## Endorsement notice

The text of the International Standard IEC 61010-2-051:2003 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61010-2-010 NOTE Harmonized as EN 61010-2-010:2003 (not modified).

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# INTERNATIONAL STANDARD

# IEC 61010-2-051

Second edition  
2003-06

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GROUP SAFETY PUBLICATION

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**Safety requirements for electrical equipment  
for measurement, control, and laboratory use –**

**Part 2-051:  
Particular requirements for laboratory equipment  
for mixing and stirring**

SIST EN 61010-2-051:2004

<https://standards.globalspec.com/std/61010-2-051-2004>  
*Règles de sécurité pour appareils électriques  
de mesurage, de régulation et de laboratoire –*

*Partie 2-051:  
Prescriptions particulières pour appareils  
de laboratoire utilisés pour mixer et agiter*

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT  
FOR MEASUREMENT, CONTROL, AND LABORATORY USE –**
**Part 2-051: Particular requirements for laboratory  
equipment for mixing and stirring**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61010-2-051 has been prepared by IEC technical committee 66: Safety of measuring, control and laboratory equipment.

This second edition cancels and replaces the first edition published in 1995, of which it constitutes a technical revision.

It has the status of a group safety publication in accordance with IEC Guide 104.

The text of this standard is based on the following documents:

FDIS	Report on voting
66/325/FDIS	66/330/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This Part 2-051 is intended to be used in conjunction with IEC 61010-1. It was established on the basis of the second edition (2001). Consideration may be given to future editions of, or amendments to, IEC 61010-1.

This Part 2-051 supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard: *Safety requirements for laboratory equipment for mixing and stirring.*

Where a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. Where the part states “addition”, “modification”, “replacement” or “deletion”, the relevant requirement, test specification, or note in Part 1 should be adapted accordingly.

In this standard:

- 1) the following print types are used:
  - requirements: in roman type;
  - NOTES: in small roman type;
  - *conformity and test: in italic type;*
  - terms used throughout this standard which have been defined in clause 3: SMALL ROMAN CAPITALS;
- 2) subclauses, figures, tables and notes which are additional to those in Part 1 are numbered starting from 101.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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# SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

## Part 2-051: Particular requirements for laboratory equipment for mixing and stirring

### 1 Scope and object

This clause of Part 1 is applicable except as follows:

#### 1.1 Scope

*Replacement:*

*Replace the whole text by the following new paragraph:*

This part of IEC 61010 is applicable to electrically operated laboratory equipment and its accessories for mechanical mixing and stirring, where mechanical energy influences the shape or size or homogeneity of materials and their accessories. Such devices may contain heating elements.

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NOTE If all or part of the equipment falls within the scope of one or more other part 2 standards of IEC 61010 as well as within the scope of this standard, it will also need to meet the requirements of those other part 2 standards. The requirements for equipment which contain heating devices are given in IEC 61010-2-010.

[SIST EN 61010-2-051:2004](https://standards.iteh.ai/catalog/standards/sist/0768f0a2-5064-4bd1-9b77-4918a10256a1/sist-en-61010-2-051-2004)

### 2 Normative references

This clause of Part 1 is applicable.

### 3 Terms and definitions

This clause of Part 1 is applicable.

### 4 Tests

This clause of Part 1 is applicable.

### 5 Marking and documentation

This clause of Part 1 is applicable except as follows:

#### 5.4.1 General

*Addition:*

*Number the existing note as Note 1 and add a new Note 101 as follows:*

NOTE 101 If a HAZARD could be caused by operating a mixer or stirrer intended for use as HAND-HELD EQUIPMENT, there should be a warning statement to that effect.